

BEFORE THE
ILLINOIS COMMERCE COMMISSION

North Shore Gas Company	:	Docket No. 12-0511
The Peoples Gas Light and Coke Company	:	Docket No. 12-0512

Direct Testimony of
Scott J. Rubin

on Behalf of
the People of the State of Illinois

AG Exhibit 3.0

November 20, 2012

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Introduction

Q. Please state your name and business address.

A. My name is Scott J. Rubin. My business address is 333 Oak Lane, Bloomsburg, PA.

Q. By whom are you employed and in what capacity?

A. I am an independent consultant and an attorney. My practice is limited to matters affecting the public utility industry.

Q. What is the purpose of your testimony in this case?

A. I have been asked by the Office of the Attorney General (“AG”) to review the cost of service studies and proposed rate designs filed by The Peoples Gas Light and Coke Company (“PGL” or “Peoples”) and North Shore Gas Company (“NS” or “North Shore”) (collectively, “Companies”).

Q. What are your qualifications to provide this testimony in this case?

A. I have testified as an expert witness before utility commissions or courts in the District of Columbia; the province of Nova Scotia; and the states of Alaska, Arizona, California, Connecticut, Delaware, Illinois, Kentucky, Maine, Maryland, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, and West Virginia. I also have testified as an expert witness before two committees of the U.S. House of Representatives and one committee of the Pennsylvania House of Representatives. I also have served as a consultant to the staffs of the Connecticut Department of Public Utility Control and the Delaware Public Service Commission, as well as to several national utility trade associations, and state and local governments throughout the country. Prior to establishing my own consulting and law practice, I was employed by the Pennsylvania

Office of Consumer Advocate from 1983 through January 1994 in increasingly responsible positions. From 1990 until I left state government, I was one of two senior attorneys in that Office. Among my other responsibilities in that position, I had a major role in setting its policy positions on water and electric matters. In addition, I was responsible for supervising the technical staff of that Office. I also testified as an expert witness for that Office on rate design and cost of service issues.

Throughout my career, I developed substantial expertise in matters relating to the economic regulation of public utilities. I have published articles, contributed to books, written speeches, and delivered numerous presentations, on both the national and state level, relating to regulatory issues. I have attended numerous continuing education courses involving the utility industry. I also have participated as a faculty member in utility-related educational programs for the Institute for Public Utilities at Michigan State University, the American Water Works Association, and the Pennsylvania Bar Institute.

Q. Do you have any experience that is particularly relevant to the issues in this case?

A. Yes, I do. I have testified on numerous occasions as a rate design and cost of service expert. In the natural gas sector, I have testified or provided consulting services for public advocates on rate design and cost of service issues in rate cases involving natural gas distribution utilities in Connecticut, Illinois, New Hampshire, Nova Scotia, and Ohio. This includes the 2009 and 2011 rate cases for PGL and NS in which I testified for the AG.

Summary

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44 **Q. What is the primary focus of your direct testimony?**

45 A. My testimony focuses on the Companies' proposed rate design for residential customers.

46 **Q. Did you review the testimony and exhibits of any of the Companies' witnesses?**

47 A. Yes. I reviewed the testimony, exhibits, and workpapers relating to the cost-of-service
48 studies and residential rate design of the following witnesses: James Schott (NS Ex. 1.0
49 and PGL Ex. 1.0), Valerie Grace (NS Ex. 12.0 and PGL Ex. 12.0), and Joylyn Hoffman
50 Malueg (NS Ex. 13.0 and PGL Ex. 13.0). I also reviewed the relevant portions of the
51 filing (the E schedules and associated workpapers) and numerous responses to discovery
52 requests that were provided by the Companies.

53 **Q. Please summarize your conclusions.**

54 A. My conclusions can be summarized as follows:

- 55 • The Companies' cost-of-service studies that show the residential non-
56 heating class as a separate customer class demonstrates the inherent
57 unfairness of the movement toward straight fixed-variable rates. The
58 studies show that non-heating customers are currently paying rates that
59 exceed the cost of service by millions of dollars per year, resulting in those
60 customers paying rates of return to the Companies that exceed 70%.
- 61 • I recommend that PGL's residential non-heating customers should pay a
62 flat monthly rate of \$17.19 per month (under PGL's proposed revenue
63 requirement) and be removed from Rider SSC and Rider VBA (if it is
64 allowed to continue). *These monthly rate figures will be revised in my*
65 *rebuttal testimony to reflect the final AG-recommended revenue*
66 *requirement numbers.*
- 67 • Similarly, I recommend that North Shore's residential non-heating
68 customers should pay a flat monthly rate of \$18.16 per month (under NS's
69 proposed revenue requirement) and be removed from Rider SSC and Rider
70 VBA (if it is allowed to continue). *These monthly rate figures will be*
71 *revised in my rebuttal testimony to reflect the final AG-recommended*
72 *revenue requirement numbers.*

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- For residential heating customers, I recommend that the Companies begin to move away from straight fixed-variable pricing, given the tremendous inequities and cross-subsidies involved in that pricing scheme.

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- For Peoples Gas, I recommend a customer charge of \$25.12 per month, a first block charge of 29.651¢ per therm, and a second block charge of 17.078¢ per therm (all under PGL's proposed revenue requirement). These rates would recover PGL's customer costs through the customer charge, distribution costs and demand costs in the first block, and demand costs only in the second block. In my opinion, this is a reasonable, cost-based pricing methodology that does not unfairly subsidize high-use customers at the expense of lower-use heating customers. *These monthly rate figures will be revised in my rebuttal testimony to reflect the final AG-recommended revenue requirement numbers.*

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- I recommend a similar pricing structure for North Shore. Specifically, I recommend (under NS's proposed revenue requirement) a customer charge of \$21.92 per month, a first block charge of 18.881¢ per therm, and a second block charge of 10.486¢ per therm. *These monthly rate figures will be revised in my rebuttal testimony to reflect the final AG-recommended revenue requirement numbers.*

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- Finally, I recommend that the Commission remove Rider VBA from the Companies' tariffs. The rider is not consistent with the fundamental purpose of regulation: protecting consumers from the market power of monopolies. Indeed, Rider VBA insulates the Companies and their investors from risks and can result in a perverse incentive structure. Further, the Companies' own cost studies reveal that the Commission's primary basis for approving Rider VBA – that all of the Companies' costs are fixed -- is a faulty assumption. For these and other reasons, I recommend that the Commission no longer give the Companies a guaranteed level of revenue recovery from residential customers.

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Q. Before you review the Company's proposals, do you have any preliminary matters to address?

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A. Yes. I want to make clear at the outset that my testimony and analysis are based on the Companies' proposed revenue requirements as originally filed. This is a standard practice because it allows different parties' cost of service and rate design recommendations to be compared on an "apples-to-apples" basis. This should not be

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taken, however, as an endorsement by me or the AG of the Companies' proposed revenue requirements. I also would note that while the Companies revised some of their revenue requirements claims in a supplemental filing on October 23, that filing did not include a revised cost-of-service study or new rate schedules. The original filing, therefore, is the only comprehensive presentation of the Companies' claims in this case.

Residential Rate Design Generally

Q. Please describe your general understanding of the Companies' residential rate design proposals.

A. PGL and NS propose to establish separate rates and customer classes for residential heating and non-heating customers. The proposal stems from the Commission order in the Companies' previous consolidated rate case¹ that required the Companies to prepare cost-of-service studies that separate low-use residential customers from higher-use residential customers. The Companies implemented this directive by using data in its customer information system concerning the use of natural gas for space heating; that is, the Companies equated low-use customers with non-heating customers.

The Companies' cost-of-service studies ("COSS") found that because of the Companies' past advocacy for very high customer charges, the existing rates paid by non-heating customers were recovering greatly in excess of the cost of serving that customer class, as I will discuss in more detail below. Consequently, the Companies are proposing substantial rate reductions for residential non-heating customers, even while they propose significant rate increases for most other customers including residential heating customers.

¹ ICC Docket Nos. 11-0280/11-0281 (cons.).

The Companies' proposed residential rates consist of a fixed-price customer charge (separate for heating and non-heating customers) and a single consumption (per-therm) charge that is the same for both heating and non-heating customers. In addition, several riders apply to residential customers, including Rider SSC to recover storage costs and Rider VBA to adjust revenues for changes in gas consumption.

Rate Design for Residential Non-Heating Customers

Peoples Gas

Q. Please describe the results of PGL's COSS for residential non-heating customers.

A. PGL's COSS under proposed rates is summarized in PGL Ex. 13.6 and 13.7. This is part of the more comprehensive COSS presented in Schedule E-6 and the WPE workpapers.

The COSS does not include any costs associated with natural gas supply (that is, there are no commodity-related costs in the COSS); rather it solely deals with costs associated with the distribution of gas to customers and related functions (such as billing and customer service). These are the costs that are normally considered a utility's "base rates," though in the case of the Companies, some of these costs are recovered through separate riders. For example, storage costs are recovered through Rider SSC.

PGL Ex. 13.6 provides a useful, one-page summary of the results of the COSS. I will focus on column C, which provides the results for the residential non-heating class. Line 5 shows total base-rate operating revenues under present rates, after an adjustment for a proposed change in Other Revenues. This line shows that under present rates residential non-heating customers provide base-rate revenues of \$31,960,081. Line 53

shows that the total cost to serve non-heating customers (including PGL's proposed overall rate of return of 7.44% and associated income taxes) is \$21,735,396. *That is, the rates PGL currently charge to residential non-heating customers exceed the cost to serve those customers by more than \$10 million per year.* This is equivalent to non-heating customers paying PGL an overall return of 74.16% (line 37), or roughly 10 times the required level of return (7.44%) that PGL claims in this case.

Q. Why are PGL's non-heating rates recovering so much more than the cost to serve non-heating customers?

A. This is a direct result of PGL's ill-advised advocacy to move toward so-called straight fixed variable ("SFV") rates, and the Commission's unfortunate adoption of that position. As I have testified on several occasions, the very high customer charges that result from SFV rates are wholly unrelated to the cost of service and are grossly unfair to low-use customers. The fundamental flaw in SFV rates is that they treat demand-related costs as "fixed" even though they are incurred based on the amount of gas customers use. It is grossly unfair to spread demand-related costs among all customers irrespective of the amount of gas used by those customers. This effectively requires non-heating customers – who have very low peak-demand requirements compared to heating customers – to pay the same amount toward demand-related costs as a heating customer who might use 10 or 20 times more gas (and who uses most of that gas during the winter peak season). Simply stated, recovering demand-related costs on a per customer, rather than a per therm, basis causes non-heating customers to subsidize the rates of heating customers.

In the case of PGL, the customer charge has gotten so high (and includes so much demand-related cost) that the subsidy is enormous. Non-heating customers are paying

rates that are almost 50% more than the cost of service: approximately \$32.0 million per year compared to a cost of service of approximately \$21.8 million per year.

Q. You said that heating customers might use 10 or 20 times more gas than non-heating customers. Is that true?

A. Yes, it is. PGL's billing analysis shows that 85% of bills issued to non-heating customers are for 10 therms per month or less. PGL Schedule E-8, page 3. In contrast, one-third of bills issued to heating customers are for 100 therms or more in a month, with about one out of every seven bills showing usage of more than 200 therms in a month. PGL Schedule E-8, page 2.

Q. What effect do those differences in consumption levels have on demand-related costs?

A. The difference in demand-related costs between heating and non-heating customers is enormous, both because of the difference in the amount of gas consumed and when that gas is consumed. As would be expected, AG Ex. 3.01 shows that heating customers use much more gas during the peak winter heating season than they use during the summer, while non-heating customers' gas usage has a much lower seasonal peak. Indeed, the exhibit shows that the average residential heating customer has a winter peak month that is 12.4 times the lowest summer month. The corresponding figure for an average non-heating customer is only 3.6 times. Thus, not only do heating customers use much more gas than non-heating customers, but they have dramatically steeper peak demands.

This combination of higher levels of consumption and dramatically higher peak demands results in residential heating customers having much higher demand-related

costs per customer than non-heating customers. Specifically, on AG Ex. 3.02 I show that average demand-related costs for a heating customer are \$17.95 per month. That same exhibit shows that average demand-related costs for a non-heating customer are only \$1.19 per month. Thus, the average heating customer causes PGL to incur demand-related costs that are 15 times the average to serve a non-heating customer. But PGL's movement toward SFV rates has used the demonstrably false assumption that each residential customer causes the company to incur the same level of demand-related costs. It is this improper treatment of demand-related costs as being unrelated to consumption that has caused residential non-heating rates to greatly exceed the cost of service.

The assumption that each customer causes a utility to incur the same level of demand-related costs is the fundamental error in the theory behind SFV rates. SFV rates only bear a rational relationship to the cost of service in the very limited (and comparatively rare) case where you have a relatively homogeneous customer class (that is, each customer has roughly the same level of usage and peak demand). SFV rates – or any rates that recover significant demand-related costs on a per-customer basis – are grossly unfair, and result in significant intra-class cross-subsidies, when a customer class includes large users, small users, seasonal peaking customers, and non-peaking customers.

215 **Q. How has PGL proposed to set new rates for residential non-heating customers?**

216 A. PGL presents two options. The first option would be to reduce the non-heating customer
217 charge from its current level of \$21.89 per month to \$15.98 per month.² This option
218 includes a distribution charge of 13.343¢ per therm for all gas consumed, compared to the
219 existing rate of 25.963¢ per therm for the first 50 therms per month (which is essentially
220 all consumption for most non-heating customers). This option would include surcharges
221 for uncollectible accounts (Rider UEA), storage (Rider SSC), and changes in
222 consumption (Rider VBA), among others. The specific rates and proof of revenues for
223 this option can be found in PGL Schedule E-5.

224 The second option would set the non-heating customer charge to \$17.01 per
225 month with no distribution charge. This option would include Rider SSC for storage
226 costs and Rider UEA for uncollectible expenses, but would not include Rider VBA.
227 The specific rates and proof of revenues for this option can be found in PGL's response
228 to AG 5.07, attached as AG Ex. 3.03.

229 **Q. What rate design do you recommend for PGL's residential non-heating customers?**

230 A. I recommend the Commission adopt a variation of PGL's second option for residential
231 non-heating customers. Specifically, I propose a flat monthly charge for all residential
232 non-heating customers that recovers essentially all base rate costs (that is, all costs except
233 municipal taxes and the commodity cost of gas). PGL's cost-of-service study calculates
234 this cost to be \$17.19 per month. PGL Ex. 13.7, p. 3, l. 40.

² PGL's existing customer charge is \$22.25 per month. This charge is offset by Rider UEA which is currently -\$0.36 per month, for a net customer charge of \$21.89 per month. At the conclusion of this case, Rider UEA will be reset to zero and all costs recovered (or refunded) through the rider will be rolled into base rates.

Q. Why is your proposed rate higher than PGL's rate under option 2?

A. The difference between my proposal and PGL's option 2 is that my proposal includes storage costs in the flat rate, while PGL's proposal collects storage costs on a per therm basis through Rider SSC.

Q. Why are you proposing a different mechanism to recover storage costs from non-heating customers?

A. Residential storage costs are driven almost entirely by heating customers' huge demands for gas during the winter. PGL uses an averaging process to determine a common storage charge for all residential customers. The result is that Rider SSC would recover substantially more than the storage-related cost of service from non-heating customers. Specifically, PGL Ex. 13.7, page 1, lines 11 and 17, shows total storage costs for non-heating customers of \$206,268. Rider SSC, however, would recover \$375,000 from non-heating customers. AG Ex. 3.03, page 3 line 10 and page 3 line 12 (non-heating sales and transportation revenues from Rider SSC). There is no justification for recovering 80% more than the storage-related cost of service from non-heating customers. This is particularly true when the very small seasonal difference in usage (fewer than 10 therms per customer per month) is unlikely to cause PGL to incur significant changes in storage costs from year to year.

In my opinion, therefore, it is reasonable and appropriate to recover storage-related costs from non-heating customers through a flat rate, rather than through Rider SSC. My proposed flat rate of \$17.19 per month includes the recovery of PGL's storage-related costs from non-heating customers, but eliminates the excessive cost recovery from those customers under Rider SSC.

Q. Earlier in your testimony, you stated that a flat rate (or SFV rate) would be appropriate only in the relatively rare instance when a customer class is homogeneous. Does the residential non-heating class meet that criterion?

A. Yes, it does. Unlike the residential heating class, the non-heating class is quite homogeneous, with 85% of bills containing usage of 10 therms or less. PGL Schedule E-8, page 3. Further, as I explained above and showed on AG Ex. 3.02, the difference between typical winter and summer usage for this class is quite small – differing by fewer than 10 therms per month.

PGL's first option would include a distribution charge of 13.343¢ per therm and a storage charge of 4.060¢ per therm, or less than \$1.70 per month for most non-heating customers in most months. With consumption varying by just a few therms from customer to customer and from month to month, in my opinion it is reasonable to simplify customers' bills, eliminate the over-collection of storage-related costs, and adopt a flat rate. An important part of that simplicity is that it removes non-heating customers from two riders (SSC and VBA) that are determined almost entirely by the consumption patterns of residential heating customers.

North Shore Gas

Q. Please describe the results of NS's COSS for residential non-heating customers.

A. NS's COSS under proposed rates is summarized in NS Ex. 13.6 and 13.7. This is part of the more comprehensive COSS presented in Schedule E-6 and the WPE workpapers.

As was the case with PGL's COSS, the NS COSS does not include any costs associated with natural gas supply.

NS Ex. 13.6 provides a useful, one-page summary of the results of the COSS. I will focus on column C which provides the results for the residential non-heating class. Line 5 shows total base-rate operating revenues under present rates, after an adjustment for a proposed change in Other Revenues. This line shows that under present rates residential non-heating customers provide base-rate revenues of \$528,013. Line 54 shows that the total cost to serve non-heating customers (including NS's proposed overall rate of return of 7.65% and associated income taxes) is \$390,723. *That is, the rates NS currently charges to residential non-heating customers exceed the cost to serve those customers by more than 35%.* This is equivalent to non-heating customers paying NS an overall return of 70.16% (line 38), or roughly nine times the required level of return (7.65%) that NS claims in this case.

Q. Are the reasons why NS's non-heating rates recover so much more than the cost of service the same as those you discussed above for PGL?

A. Yes. The excessive rates are a direct result of NS's move toward SFV rates.

Q. Are the differences in consumption between NS heating and non-heating customers similar to those you described above for PGL's heating and non-heating customers?

A. Yes, the differences are similar, but not identical, to those I described in PGL's service area. NS's billing analysis shows that 75% of bills issued to non-heating customers are for 10 therms per month or less. NS Schedule E-8, page 3. In contrast, 39% of bills issued to heating customers are for 100 therms or more in a month; with about one out of every seven bills showing usage of more than 200 therms in a month. NS Schedule E-8, page 2.

Q. What effect do those differences in consumption levels have on demand-related costs?

A. The difference in demand-related costs between heating and non-heating customers is enormous, both because of the difference in the amount of gas consumed and when that gas is consumed. As was the case for PGL, AG Ex. 3.04 shows that NS heating customers use much more gas during the peak winter heating season than they use during the summer, while non-heating customers' gas usage has a much lower seasonal peak. Indeed, the exhibit shows that the average NS residential heating customer has a winter peak month that is 10.5 times the lowest summer month. The corresponding figure for non-heating customers is only 3.2 times. Thus, not only do heating customers use much more gas than non-heating customers, but they have dramatically steeper peak demands.

This combination of higher levels of consumption and dramatically higher peak demands results in residential heating customers having much higher demand-related costs per customer than non-heating customers. Specifically, on AG Ex. 3.05 I show that average demand-related costs for a NS heating customer are \$11.72 per month. That same exhibit shows that average demand-related costs for a non-heating customer are only \$1.11 per month. Thus, the average heating customer causes NS to incur demand-related costs that are 10 times the average to serve a non-heating customer. But NS's movement toward SFV rates has used the demonstrably false assumption that each residential customer causes the company to incur the same level of demand-related costs. As was the case with PGL, it is NS's improper treatment of demand-related costs as being unrelated to consumption that has caused residential non-heating rates to greatly exceed the cost of service.

Q. How has NS proposed to set new rates for residential non-heating customers?

A. NS presents two options. The first option would be to reduce the non-heating customer charge from its current level of \$21.92 per month to \$17.05 per month.³ This option includes a distribution charge of 7.742¢ per therm for all gas consumed, compared to the existing rate of 16.942¢ per therm for the first 50 therms per month (which is essentially all consumption by most non-heating customers). This option would include surcharges for uncollectible accounts (Rider UEA), storage (Rider SSC), and changes in consumption (Rider VBA), among others. The specific rates and proof of revenues for this option can be found in NS Schedule E-5.

The second option would set the non-heating customer charge to \$18.10 per month with no distribution charge. This option would include Rider SSC for storage costs and Rider UEA for uncollectibles, but would not include Rider VBA. The specific rates and proof of revenues for this option can be found in NS's response to AG 5.01, attached as AG Ex. 3.06.

Q. What rate design do you recommend for NS's residential non-heating customers?

A. As I did for PGL, I recommend the Commission adopt a variation of NS's second option for residential non-heating customers. Specifically, I propose a flat monthly charge for all residential non-heating customers that recovers essentially all base rate costs (that is, all costs except municipal taxes and the commodity cost of gas). NS's cost-of-service study calculates this cost to be \$18.16 per month. PGL Ex. 13.7, p. 3, l. 40.

³ NS's existing customer charge is \$22.00 per month. This charge is offset by Rider UEA which is currently -\$0.08 per month, for a net customer charge of \$21.92 per month. At the conclusion of this case, Rider UEA will be reset to zero and all costs recovered (or refunded) through the rider will be rolled into base rates.

Q. Why is your proposed rate six cents higher than NS's rate under option 2?

A. The difference between my proposal and NS's option 2 is that my proposal includes storage costs in the flat rate, while NS's proposal collects storage costs on a per therm basis through Rider SSC.

Q. Why are you proposing a different mechanism to recover storage costs from non-heating customers?

A. Storage costs are driven almost entirely by heating customers' huge demands for gas during the winter. NS uses an averaging process to determine a common storage charge for all residential customers. The result is that Rider SSC would recover substantially more than the storage-related cost of service from non-heating customers. Specifically, NS Ex. 13.7, page 1, lines 11 and 17, shows total storage costs for non-heating customers of only \$719. Rider SSC, however, would recover \$3,000 from non-heating customers. AG Ex. 3.06, page 3 line 32 and page 3 line 38 (non-heating sales and transportation revenues from Rider SSC). There is no justification for recovering more than four times the storage-related cost of service from non-heating customers. This is particularly true when the very small seasonal difference in usage (about 15 therms per customer per month) is unlikely to cause NS to incur significant changes in storage costs from year to year.

In my opinion, therefore, it is reasonable and appropriate to recover storage-related costs from non-heating customers through a flat rate, rather than through Rider SSC. My proposed flat rate of \$18.16 per month includes the recovery of NS's storage-related costs from non-heating customers, but eliminates the excessive cost recovery from those customers under Rider SSC.

Q. Does the NS residential non-heating class meet the homogeneity standard in the same manner as PGL's non-heating class?

A. Yes. The NS non-heating class is quite homogeneous, with 75% of bills containing usage of 10 therms or less. NS Schedule E-8, page 3. Further, as I explained above and showed on AG Ex. 3.05, the difference between typical winter and summer usage for this class is quite small – differing by about 15 therms per month.

NS's first option would include a distribution charge of 7.742¢ per therm and a storage charge of 0.936¢ per therm, or less than \$1.00 per month for most non-heating customers in most months. With consumption varying by just a few therms from customer to customer and from month to month, in my opinion it is reasonable to simplify customers' bills, eliminate the over-collection of storage-related costs, and adopt a flat rate. An important part of that simplicity is that it removes non-heating customers from two riders (SSC and VBA) that are determined almost entirely by the consumption patterns of residential heating customers.

Rate Design for Residential Heating Customers

Peoples Gas

Q. Please summarize your understanding of PGL's proposed rate design for residential heating customers.

A. PGL presents two rate design options for residential heating customers. The first option would be to increase the heating customer charge from its current level of \$21.89 per

month to \$32.83 per month.⁴ This option includes a distribution charge of 13.343¢ per therm for all gas consumed, compared to the existing rate of 25.963¢ per therm for the first 50 therms per month and 11.806¢ per therm for usage above 50 therms per month. This option would include surcharges for uncollectible accounts (Rider UEA), storage (Rider SSC), and changes in consumption (Rider VBA), among others. The specific rates and proof of revenues for this option can be found in PGL Schedule E-5.

The second option would set the heating customer charge to \$44.69 per month with no distribution charge. This option would include Rider SSC for storage costs and Rider UEA for uncollectible expenses, but would not include Rider VBA. The specific rates and proof of revenues for this option can be found in AG Ex. 3.03 that I previously identified.

Q. Do you agree with either of PGL's rate design proposals for residential heating customers?

A. No, I do not. PGL's proposals neither recognize nor appropriately recover the substantial demand-related costs that PGL incurs to serve heating customers. As I explained above, except in the rare case when a customer class is relatively homogeneous, it is improper to recover demand-related costs on a per-customer basis. This is the flaw that led to PGL's existing rates that greatly over-recover costs from non-heating customers.

The same problem exists within the heating class. There are small customers (homes with just a few hundred square feet) and large customers (homes with several thousand square feet to heat). To verify this, I reviewed the U.S. Census Bureau's

⁴ See footnote 2, above, for an explanation of the \$21.89 customer charge.

American Housing Survey for Chicago.⁵ Attached as AG Ex. 3.07 is a summary of data I extracted from Table 3.3 of that survey. That exhibit shows that within the City of Chicago, there were approximately 265,000 owner-occupied, single-unit, detached homes. Those houses range in size from fewer than 1,000 square feet (8.5% of homes) to more than 4,000 square feet (6.7% of homes). Moreover, Table 3.5 of the survey shows that 90.6% of all housing units in Chicago heat with natural gas, so I would expect these data to fairly represent the diversity within PGL's class of residential heating customers. In addition, of course, PGL also has customers who live in multi-unit buildings with apartments of various sizes, which would serve to further enhance the diversity of the residential heating class.

Q. How do PGL's proposed residential heating rates fail to recognize or appropriately recover demand-related costs, as you stated above?

A. PGL has proposed a per-therm distribution charge of 13.343¢ per therm for all consumption by residential heating customers. PGL's COSS, however, shows that PGL's demand-related costs are higher than this amount. Specifically, the COSS shows that demand-related costs (excluding storage costs, which are recovered through Rider SSC) total \$118,353,507, as I calculate on AG Ex. 3.08, lines 9-11. When this figure is divided by PGL's projected sales to heating customers, the demand-related cost per therm is 17.078¢ per therm, as I show on line 13 of the exhibit. That is, PGL's demand-related cost is approximately 29% higher than its proposed rate per therm.

⁵U.S. Census Bureau, American Housing Survey, Metropolitan Area Summary Data for Chicago Metropolitan Area (2009) < <http://www.census.gov/housing/ahs/data/chicago.html> >, last accessed 11/9/2012.

Q. What do you recommend?

A. I recommend that PGL retain two consumption blocks in its residential heating rate. The first block would recover demand-related costs plus a portion of the customer-related costs that were allocated to the distribution system, primarily through an allocation of distribution mains. Treating some distribution costs as being customer-related is controversial and depends on statistical analyses that can be of questionable validity. Rather than engage in a debate about those analytical procedures in this case, I believe it is reasonable to recover some of that allegedly customer-related distribution cost through the first 50 therms per month that are sold. Recovering these costs in the first consumption block will provide PGL with significant stability in the recovery of those revenues and will not distort the demand-related price signal that is sent to customers in the second (more weather-sensitive) consumption block.

It could be argued that all of the allegedly customer-related portion of distribution costs should be recovered through the first block charge. Doing so, however, would decrease the customer charge by about 50% and approximately double the first block charge. In my opinion, such a result is not consistent with sound rate design principles, including the principles of gradualism and rate continuity, because PGL already has been permitted to greatly increase its customer charge. While I disagree with that decision, it was made in a prior case and we must now address how to design rates going forward. I recommend, therefore, that 75% of customer-related distribution costs should be recovered through the customer charge, with the remaining 25% of those costs recovered through the first consumption block charge. I calculate the actual rates under PGL's proposed revenue requirement on AG Ex. 3.08.

Line 5 of that exhibit shows that the customer charge would be \$25.12 per month, an increase of 14.8% over the existing rate of \$21.89 per month. Line 14 shows that the first block charge would be 29.651¢ per therm, an increase of 14.2% over the existing charge of 25.963¢ per therm. Both of these increases are consistent with the non-storage base-rate increase of approximately 15.6% proposed by PGL for heating customers.⁶ Finally, I recommend that the second block charge be increased from 11.808¢ per therm to 17.078¢ per therm. While this is a more substantial percentage increase (44.7%), it amounts to about five cents per therm which should not have a dramatic effect on most customers' heating bills. Moreover, as I explained above, this is the minimum increase required to have the rate at least recover the demand-related costs PGL incurs to serve its heating customers.

I also would reiterate that these rates are prepared under PGL's proposed revenue requirement. To the extent that the Commission finds that the revenue requirement is lower than PGL proposed, it would moderate the level of the actual rate increase (if any) that appears on customers' bills at the conclusion of this case.

North Shore Gas

Q. Please summarize your understanding of NS's proposed rate design for residential heating customers.

A. NS presents two rate design options for residential heating customers. The first option would be to increase the heating customer charge from its current level of \$21.92 per

⁶ PGL Schedule E-5 shows present base rate revenues for residential heating customers, excluding revenues from Rider SSC, of \$301,399,000 and proposed non-storage revenues of \$348,532,000, for a proposed increase of 15.6%.

month to \$27.71 per month.⁷ This option includes a distribution charge of 7.742¢ per therm for all gas consumed, compared to the existing rate of 16.942¢ per therm for the first 50 therms per month and 5.032¢ per therm for usage above 50 therms per month. This option would include surcharges for uncollectible accounts (Rider UEA), storage (Rider SSC), and changes in consumption (Rider VBA), among others. The specific rates and proof of revenues for this option can be found in NS Schedule E-5.

The second option would set the heating customer charge to \$36.04 per month with no distribution charge. This option would include Rider SSC for storage costs and Rider UEA for uncollectible expenses, but would not include Rider VBA. The specific rates and proof of revenues for this option can be found in AG Ex. 3.06 that I previously identified.

Q. Do you agree with either of NS's rate design proposals for residential heating customers?

A. No, I do not. As was the case with PGL's heating rate design, NS's proposals neither recognize nor appropriately recover the substantial demand-related costs that NS incurs to serve heating customers. As I explained above, except in the rare case when a customer class is relatively homogeneous, it is improper to recover demand-related costs on a per-customer basis. This is the flaw that led to NS's existing rates that greatly over-recover costs from non-heating customers.

As I explained above for PGL, the same problem exists within the heating class in NS's service area. There are small customers (homes with just a few hundred square

⁷ See footnote 3, above, for an explanation of the \$21.92 customer charge.

feet) and large customers (homes with several thousand square feet to heat). Census data with square footage of housing units in Lake County (where most NS customers are located) are not available. Data from other sources, however, indicate that there is considerable diversity within the housing stock in Lake County. AG Ex. 3.09 contains data provided by USA.com.⁸ The exhibit shows a mix of housing units in Lake County, ranging from homes with two bedrooms or less (33% of homes) to those with four bedrooms or more (33% of homes); and homes with four rooms or less (22% of homes) to those with nine rooms or more (20% of homes). The same source shows that about 87% of Lake County homes heat with natural gas, so I consider it reasonable to conclude that this level of diversity applies to the class of NS residential heating customers.

Q. How do NS's proposed residential heating rates fail to recognize or appropriately recover demand-related costs, as you stated above?

A. NS has proposed a per-therm distribution charge of 7.742¢ per therm for all consumption by residential heating customers. NS's COSS, however, shows that NS's demand-related costs are higher than this amount. Specifically, the COSS shows that demand-related costs (excluding storage costs, which are recovered through Rider SSC) total \$19,610,086, as I calculate on AG Ex. 3.10, lines 9-11. When this figure is divided by NS's projected sales to heating customers, the demand-related cost per therm is 10.486¢ per therm, as I show on line 13 of the exhibit. That is, NS's demand-related cost is approximately 35% higher than its proposed rate per therm.

⁸ USA.com, Lake County Housing, <<http://www.usa.com/lake-county-il-housing.htm>>, last accessed 11/9/2012.

513 **Q. What do you recommend?**

514 A. I recommend the same rate design concept that I described above for PGL. That is, NS
515 should retain two consumption blocks in its residential heating rate. For the reasons I
516 described above, the first block would recover demand-related costs plus a portion of the
517 allegedly customer-related distribution costs.

518 As I did for PGL, I recommend that 75% of customer-related distribution costs
519 should be recovered through the customer charge, with the remaining 25% of those costs
520 recovered through the first consumption block charge. I calculate the actual rates under
521 PGL's proposed revenue requirement on AG Ex. 3.10.

522 Line 5 of that exhibit shows that the customer charge would be \$21.92 per month,
523 which is the same as the existing customer charge net of Rider UEA which is being rolled
524 into base rates. Line 14 shows that the first block charge would be 18.881¢ per therm, an
525 increase of 11.4% over the existing charge of 16.942¢ per therm. These increases are
526 reasonable, in my opinion, given the current rate structure that has an exceedingly low
527 second block charge per therm and an inflated customer charge. Given the non-storage
528 base-rate increase of approximately 10.7% proposed by NS for heating customers, I
529 consider these increases to be reasonable.⁹ Finally, I recommend that the second block
530 charge be increased from 5.032¢ per therm to 10.486¢ per therm. While this is a
531 significant percentage increase (more than 100%), it amounts to about five cents per
532 therm which should not have a dramatic effect on most customers' heating bills.

⁹ NS Schedule E-5 shows present base rate revenues for residential heating customers, excluding revenues from Rider SSC, of \$56,586,000 and proposed non-storage revenues of \$62,628,000, for a proposed increase of 10.7%.

Moreover, as I explained above, this is the minimum increase required to have the rate at least recover the demand-related costs NS incurs to serve its heating customers.

I also would reiterate that these rates are prepared under NS's proposed revenue requirement. To the extent that the Commission finds that the revenue requirement is lower than NS proposed, it would moderate the level of the actual rate increase (if any) that appears on customers' bills at the conclusion of this case.

Setting Rates to Recover a Different Revenue Requirement

Q. How do you recommend the Commission should set rates to recover a different revenue requirement than the Companies proposed?

A. I recommend that the Commission follow the same procedure I used in AG Exhibits 3.08 and 3.10. Specifically, after the COSS is re-run (or rate elements are scaled back in proportion) to reflect adjustments to the Companies' accounting claims, the new results for customer costs, customer-related distribution costs, and demand costs (as well as any sales adjustments) should be used to recalculate AG Exhibits 3.08 and 3.10. This will derive the new customer charge, first block charge, and second block charge for each of the Companies in a manner consistent with the cost of service.

Rider VBA

Q. What is Rider VBA?

A. Rider VBA is a tariff that assures the Companies they will receive the same level of net revenues from customers regardless of how much (or how little) gas the Companies sell. Rider VBA is referred to as a "decoupling" tariff because it decouples the net revenues a utility receives from the amount of utility service it sells.

555 **Q. In your opinion, should Rider VBA remain a part of the Companies' tariffs?**

556 A. No, I am strongly opposed to Rider VBA and other decoupling mechanisms. There are at
557 least two fundamental problems with decoupling as reflected in Rider VBA. First, it
558 assumes that every new customer added after the rate case should automatically be
559 deemed to be just like an average customer. Second, it is based on the assumption that the
560 utility is somehow entitled to recover a certain level of revenues from each customer in
561 order to recover its fixed costs.

562 **Q. Please discuss your first concern: that decoupling assumes that every new customer**
563 **should automatically be deemed to be just like an average customer.**

564 A. Rider VBA improperly assumes that every new customer – that is, each customer added
565 after this rate case is concluded – should use the same amount of natural gas as the
566 average, existing customer. Specifically, the calculation of the proposed reconciliation in
567 Rider VBA assumes that the Companies are entitled to have all customers – new and
568 existing – use the average amount of gas that existing customers use. Simply put, this is
569 not a reasonable assumption.

570 **Q. Why not?**

571 A. First, there is no evidence showing how the costs to serve new customers compare to the
572 costs to serve existing customers. For example, the Companies make substantial
573 expenditures each year to maintain, repair, and replace old distribution mains. Such
574 expenditures, however, are not being incurred to serve new customers. Second, and more
575 importantly, it is not reasonable to expect new customers to use the same amount of gas
576 as average existing customers. New gas appliances (especially space heating systems) are
577 much more efficient than older appliances. New dishwashers, washing machines, and

showerheads use hot water much more efficiently than older models. New homes tend to be much better insulated than older homes.

Q. Are there any data to show that newer homes are more energy efficient than older homes?

A. Yes. According to the U.S. Department of Energy, the more recently a home is constructed, the lower the amount of energy used per square foot.¹⁰ Since space heating accounts for more than 50% of home energy use,¹¹ it is reasonable to conclude that newer homes are more efficient to heat than are older homes. Thus, the assumption embedded in Rider VBA (that new customers should use the same amount of natural gas as existing customers) is fundamentally flawed.

Q. Please discuss your second concern: the supposed entitlement of the Companies to recover a certain level of revenue from each customer.

A. The premise underlying Rider VBA is that the Companies are entitled to recover a certain amount of revenue from each customer (on average) in a customer class. This represents a fundamental change in the relationship between a utility and its customers. Utilities have never been guaranteed the recovery of a certain amount of revenue from their customers. Instead, the ratemaking process provides the utility with an opportunity to earn a particular return based on a test-year estimate of the amount of services the utility will sell. No utility customer is required to use a certain amount of the utility's service, and a customer is free to use none at all if it so desires.

¹⁰ U.S. Department of Energy, *Buildings Data Book* (2012), Table 2.3.12, available at: <<http://buildingsdatabook.eren.doe.gov>>, last accessed 11/9/2012.

¹¹ *Id.*, Chapter 2.

The nature of utility service is that the utility stands ready, willing, and able to provide service when and if the customer demands it. There are no guarantees. The utility takes the risk that the customer might demand more or less of the service than the utility expects, or that the customer might become so dissatisfied with the cost or quality of utility service that the customer pursues an alternative (such as replacing a gas clothes dryer with an electric one). And the customer assumes the risk that regulators will ensure that the utility will live up to its obligation to provide safe and reliable service at a just and reasonable rate.

The gas customer must give the gas utility an easement and allow the utility to install a meter on the customer's property. The customer also must allow the utility to have access to the property at any time to read the meter and test or maintain the facilities. The customer receives a bill from the gas company each month that includes a customer charge for the privilege of being a customer – even if the household used no gas that month.

Simply put, the gas customer bears costs and risks that would not be borne in a competitive environment. In return, the gas customer receives a promise of on-demand service direct to the home. That is the fundamental nature of the bargain: A customer cedes certain rights to utilities – rights that the customer does not give to any other supplier or vendor – and agrees to pay a bill each month, even when no service is used. In exchange, the customer receives a promise that service will be delivered when and as needed. The customer does not promise anything else. If a utility's service is bad, or its prices become too high, the customer may install different equipment or appliances to avoid the need for some or all of the utility's service. If the utility's service is good and

the prices are reasonable, the customer may go in the opposite direction (for example, by replacing an electric stove with a gas one).

Moreover, the amount that a utility actually sells can depend on many factors. For a natural gas utility, it is affected not only by weather, but also by general economic conditions, the price of alternative fuels, the types of appliances and equipment available in the marketplace, and the quality and reliability of the utility's service. For example, if a utility suffers an interruption in service that lasts two days, it will sell less gas to affected customers. It would be grossly unreasonable – some would even call it absurd or the very definition of chutzpah – to allow the utility to increase customers' rates because the utility did not "sell enough gas" during the outage.

Simply stated, Rider VBA represents a fundamental change in the relationship between the customer and the utility. Decoupling seeks to have customers collectively guarantee a certain level of sales to the utility – regardless of weather conditions, the community's financial circumstances, global energy concerns, appliance and equipment offerings in the marketplace, or the price and quality of the utility's service. Decoupling shifts an extraordinary level of risk to customers and removes that risk from the utility. Further, if decoupling focuses only on per-customer dollars and sales – as Rider VBA does – then it could provide perverse incentives to the utility.

Q. What types of perverse incentives could the Companies receive under its decoupling proposal?

A. As one example, utilities would no longer have an incentive to ensure that it can reliably deliver gas on demand to customers. What would happen to the Companies if they failed

to have enough gas in storage or did not properly maintain their systems, causing more outages? Obviously, the Companies would not sell as much gas as they could have sold. Normally that means that they would earn less money than they could have otherwise. Under decoupling, however, they simply collect less money today, but get to recover those lost earnings from customers tomorrow. So why should a utility with a decoupling rider spend extra money, or incentivize its employees to “go the extra mile” to serve customers? Decoupling removes the incentive to maintain a reliable system that is capable of meeting 100% of customers’ demands for gas service.

Indeed, taken to its logical conclusion, decoupling could actually encourage the Companies to divert gas to competitive customers (such as power plants) and away from captive customers. They would earn a margin on each sale to competitive customers and would recover (through the decoupling rider) the lost margin on unmade sales to captive customers. I cannot imagine a worse incentive structure for a natural gas utility.

Q. Are there any other problems with Rider VBA and similar rate mechanisms?

A. Yes. At its heart, decoupling is based on the premise that it is the Commission’s job to protect the utility from the vagaries of the marketplace and to safeguard the utility’s investors from changes in customer demand. Nothing could be further from the truth. In fact, the fundamental purpose of regulation is to protect consumers from the unfettered market power of monopolists; not to protect the revenue stream or profit levels of those monopolists.

Q, On what basis did the Commission conclude that Rider VBA should be adopted on a permanent basis in the Companies' last rate case?

A. In its Order in Docket No. 11-0280/11-0281, the Commission concluded:

Some of the problems that Rider VBA was originally intended to protect the utilities from were the reality of fixed costs against a backdrop of a diminishing customer base and resulting revenue losses as well as revenue losses attributable to the implementation of aggressive energy efficiency programs. The reasons to continue Rider VBA are that it is a symmetrical and transparent formula for collecting the approved distribution revenue requirements -- not more or less -- from customers if the Commission chooses not to provide fully for recovery of fixed costs through fixed charges. There are however, additional benefits to ratepayers from Rider VBA. As Staff witness Dr. Brightwell indicated in his testimony, Rider VBA reduces the reliance on forecasting customers and usage to set rates. Staff Exhibit 6.0, pp. 4-5. The forecasts are inevitably incorrect each year, and they are only correct on average. Thus, Rider VBA prevents harm to either the ratepayer or the utility from usage that deviates from the average. It also protects ratepayers in the event the utilities generate or choose a forecast that underestimates sales volumes. Id. at 9. Absent Rider VBA, such a forecast set rates too high and unjustifiably increases revenues and profits to the Utilities. Id. With Rider VBA, such a forecast is ineffective at increasing profits, because over collections are refunded to customers.

Another advantage of Rider VBA as pointed out by Dr. Brightwell is that it diminishes the advantage that the utility has from choosing the timing of its next rate case. Id. at 5. He maintains that without Rider VBA, a forecast that does not account for sales growth leads to over collections. Under this scenario the Utilities have no incentive to petition for a change in rates because such a petition reduces their profits. However, a forecast over-estimating growth in sales causes the Utilities to under collect, and those Utilities have an incentive to file for an increase in rates. Since most rate cases are filed by the Utilities, this asymmetry is to the Utilities advantage and the ratepayer's.

Final Order, Docket No. 11-0721 at 64.

Q. Does this rationale still apply in light of what we know about fixed cost recovery based on the Companies' cost studies submitted in this case?

A. No, it does not. The Commission in its 11-0280/0281 Order made clear that it was choosing Rider VBA over the Companies' alternative SFV proposal. The Company again offers an SFV rate as a conditional tariff¹² and an alternative to Rider VBA in this docket, should the Illinois Appellate Court reverse the Commission's decision to implement a decoupling rider. In both instances, adoption of Rider VBA (and its alternative) are based on the incorrect assumption that all of the Companies' costs are fixed, and that customer demand does not drive costs.

As I demonstrated above, the Companies' own cost studies show that such assumptions are false. As I have testified on several occasions, and as the cost studies in this case prove, the very high customer charges that result from SFV rates are wholly unrelated to the cost of service and are grossly unfair to low-use customers. The fundamental flaw in SFV rates – and indeed the Commission's adoption of Rider VBA -- is that they treat demand-related costs as "fixed" even though they are incurred based on the amount of gas customers use. It is grossly unfair to spread demand-related costs among all customers irrespective of the amount of gas used by those customers. Simply stated, recovering demand-related costs on a per customer, rather than a per therm, basis causes low-use heating customers (such as those living in small apartments) to subsidize the rates of high-use heating customers (such as those living in large single-family homes).

¹² It is my understanding that the AG will challenge the lawfulness of the proposed conditional tariff.

The assumption that each customer causes a utility to incur the same level of demand-related costs is the fundamental error in the theory behind SFV rates and Rider VBA. Like SFV rates – or any rates that recover significant demand-related costs on a per-customer basis – Rider VBA is grossly unfair, and results in significant intra-class cross-subsidies, when a customer class includes large users, small users, seasonal peaking customers, and non-peaking customers.

Q. What other reasons have proponents of decoupling riders offered for purposes of encouraging regulators to adopt them?

A. Some proponents of decoupling riders argue that these revenue adjustment mechanisms remove the “disincentive” for utilities to invest in energy efficiency.

Q. Has the existence of Rider VBA triggered increased investment by PGL and NS in their ratepayer-funded energy efficiency programs, given the guaranteed revenue recovery enabled by Rider VBA?

A. No. Under Section 8-104 of the Public Utilities Act, natural gas delivery service utilities are required to provide ratepayer-funded energy efficiency programs. Under that statute, the Companies are expected to meet annual incremental natural energy savings requirements “by showing that total savings associated with measures implemented after May 31, 2011 were equal to the sum of each annual incremental savings requirement from May 31, 2011 through the end of the applicable year....”¹³ Incremental energy savings goals increase each year according to statutorily defined percentage levels. As I understand it, PGL and NS stated they were not attempting to achieve savings beyond the statutorily established minimums. Docket No. 10-0564, Order of May 24, 2011, 289

¹³ 220 ILCS 5/8-104(c).

740 PUR4th 357. Thus, the Commission's adoption of Rider VBA has not increased the
741 Companies' annual energy efficiency spending.

742 **Q. What do you recommend?**

743 A. I recommend that the Commission remove Rider VBA from the Companies' tariffs and
744 help restore the essential purpose of rate regulation, which is to protect consumers from
745 monopolists' market power.

746 **Q. Does this conclude your direct testimony?**

747 A. Yes, it does.